(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 4 August 2005 (04.08.2005)

PCT

(10) International Publication Number WO 2005/071136 A2

(51) International Patent Classification7:

C23C 16/00

(21) International Application Number:

PCT/GB2005/000279

(22) International Filing Date: 26 January 2005 (26.01.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0401644.0

26 January 2004 (26.01.2004) GB

- (71) Applicant (for all designated States except US): CAM-BRIDGE UNIVERSITY TECHNICAL SERVICES LIMITED [GB/GB]; 16 Mill Lane, Cambridge CB2 1SB (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): GENG, Junfeng [CN/GB]; 127 Pheasant Rise, Bar Hill, Cambridge CB3 8SD (GB). JOHNSON, Brlan, F., G. [GB/GB]; The Masters Lodge, Fitzwilliam College, Huntingdon Road, Cambridge CB3 0DG (GB).
- (74) Agent: HATT, Anna, L.; Beck Greener, Fulwood House, 12 Fulwood Place, London WC1V 6HR (GB).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), European (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF PRODUCING CARBON-ENCAPSULATED METAL NANOPARTICLES

(57) Abstract: A method of producing carbon-encapsulated metal nanoparticles, for example carbon-encapsulated magnetic metal nanoparticles, comprises the steps of: providing a carbon-containing metal salt or organometallic compound in a reactor, for example a vessel having a restricted opening; and decomposing the carbon-containing metal salt or organometallic compound, for example by heating, whilst maintaining carbon within the reactor to form carbon-encapsulated metal nanoparticles.